



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Haim B. Gunner et al.                      Art Unit : 1632  
Serial No. : 10/608,582                                      Examiner : Unknown  
Filed : June 23, 2003  
Title : NOVEL ANTIFUNGAL BACTERIUM AND COMPOSITIONS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449.

This statement is being filed before the receipt of a first Office action on the merits.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: Nov 13, 2003

Ronald C. Lundquist  
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Lisa M. Becker  
Typed or Printed Name of Person Signing Certificate



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TRANSMITTAL

The following correspondence relating to this application is enclosed for filing:

1. Information Disclosure Statement (1 page);
2. Form PTO-1449 (4 pages);
3. Copies of Cited References (73 references); and
4. A Return Postcard.

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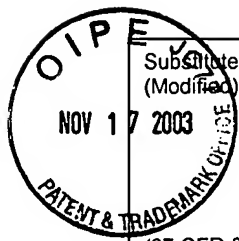
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 Substitute Form PTO-1449  
 (Modified)

 U.S. Department of Commerce  
 Patent and Trademark Office

 Attorney's Docket No.  
 07880-121001

 Application No.  
 10/608,582

**Information Disclosure Statement  
 by Applicant**

(Use several sheets if necessary)

(37 CFR §1.98(b))

 Applicant  
 Haim B. Gunner et al.

 Filing Date  
 June 23, 2003

 Group Art Unit  
 1632

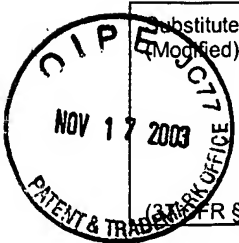
**U.S. Patent Documents**

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	4,717,653	1/5/88	Webster, Jr.			
	AB	4,985,363	1/15/91	Inoue et al.			
	AC	5,068,105	11/26/91	Lewis et al.			
	AD	5,100,455	3/31/92	Pinckard et al.			
	AE	5,288,488	2/22/94	Backman et al.			
	AF	5,316,940	5/31/94	Georgiou et al.			
	AG	5,348,742	9/20/94	Howell et al.			
	AH	5,405,766	4/11/95	Kallury et al.			
	AI	5,496,547	3/5/96	Lam et al.			
	AJ	5,543,301	8/6/96	Handelsman et al.			
	AK	5,570,973	11/5/96	Hunt			
	AL	5,626,437	5/6/97	Hunt et al.			
	AM	5,670,368	9/23/97	McLaughlin et al.			
	AN	5,714,507	2/3/98	Valcke et al.			
	AO	5,733,067	3/31/98	Hunt et al.			
	AP	5,756,087	5/26/98	Ligon et al.			
	AQ	5,756,304	5/26/98	Jovanovich			
	AR	5,780,023	7/14/98	McLaughlin et al.			
	AS	5,900,236	5/4/99	Gerhardson et al.			
	AT	5,908,774	6/1/99	Shaw			
	AU	5,955,348	9/21/99	Ligon et al.			
	AV	5,972,689	10/26/99	Cook et al.			
	AW	5,980,747	11/9/99	Vandenbergh et al.			
	AX	6,060,051	5/9/00	Heins et al.			
	AY	6,077,505	6/20/00	Parke et al.			
	AZ	6,103,875	8/15/00	Martinez-Miller et al.			
	AAA	6,156,560	12/5/00	Chun			

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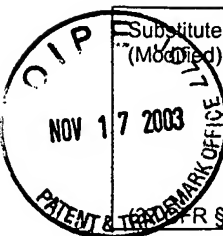
Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 07880-121001	Application No. 10/608,582
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Haim B. Gunner et al.	
		Filing Date June 23, 2003	Group Art Unit 1632

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ABB	6,204,049	3/20/01	Bennett et al.			
	ACC	6,280,719	8/28/01	Suh			
	ADD	6,312,940	11/6/01	Schisler et al.			
	AEE	6,319,497	11/20/01	Casida, Jr. et al.			
	AFF	6,455,035	9/24/02	Suri et al.			
	AGG	6,503,746	1/7/03	Daane et al.			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AHH							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AII	Alabouvette et al., "Recent Advances in the Biological Control of Fusarium Wilts," <u>Pestic. Sci.</u> , 1993, 37(4):365-373
	AJJ	Ash et al., "Molecular identification of rRNA group 3 bacilli (Ash, Farrow, Wallbanks and Collins) using a PCR probe test, proposal for the creation of a new genus <i>Paenibacillus</i> ," <u>Antonie van Leeuwenhoek</u> , 1993, 64:253-260
	AKK	AUW (Auburn University Website), "PGPR and rhizobacteria. Biocontrol Institute, Auburn University, Auburn, AL, <a href="http://www.ag.auburn.edu/bci/pgpr.htm">http://www.ag.auburn.edu/bci/pgpr.htm</a>
	ALL	Bashan et al., "Proposal for the division of plant growth-promoting rhizobacteria into two classifications: biocontrol-PGPB (plant growth-promoting bacteria) and PGPB," <u>Soil Biol. Biochem.</u> , 1998, 30:1225-1228
	AMM	Batson, Jr. et al., "Vegetables," <u>Biological and Cultural Tests for Control of Plant Diseases</u> , 1999, 14:149-150, APS Press, St. Paul, MN
	ANN	Boland and Kuykendall (eds.), <u>Plant-Microbe Interactions and Biological Control</u> , 1998, Marcel Dekker, NY (TOC only)
	AOO	Burgess and Keane, "Biological control of <i>Botrytis cinerea</i> on chickpea seed with <i>Trichoderma</i> spp. and <i>Gliocladium roseum</i> : indigenous versus non-indigenous isolates," <u>Plant Pathol.</u> , 1997, 46:910-918
	APP	Cartwright and Benson, "Optimization of Biological Control of Rhizoctonia Stem Rot of Poinsettia by <i>Paecilomyces lilacinus</i> and <i>Pseudomonas cepacia</i> ," <u>Plant Diseases</u> , 1995, 79:301-308
	AQQ	Deacon, "Significance of Ecology in the Development of Biocontrol Agents against Soil-borne Plant Pathogens," <u>Biocontrol Science and Technology</u> , 1991, 1:5-20
	ARR	Handelsman and Stabb, "Biocontrol of Soilborne Plant Pathogens," <u>Plant Cell</u> , 1996, 8:1855-1869

Examiner Signature	Date Considered
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Substitute Form PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark OfficeAttorney's Docket No.  
07880-121001Application No.  
10/608,582**Information Disclosure Statement  
by Applicant**

(Use several sheets if necessary)

Applicant  
Haim B. Gunner et al.Filing Date  
June 23, 2003Group Art Unit  
1632**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
	ASS.	Haran et al., "Increased Constitutive Chitinase Activity in Transformed <i>Trichoderma harzianum</i> ," <u>Biological Control</u> , 1993, 3:101-108
	ATT.	Hardy et al., "Applications of the Acetylene-Ethylene Assay for Measurement of Nitrogen Fixation," <u>Soil Biol. Biochem.</u> , 1973, 5:47-81
	AUU.	Herr, "Biological control of <i>Rhizoctonia solani</i> by binucleate <i>Rhizoctonia</i> spp. and hypovirulent <i>R. solani</i> agents," <u>Crop Protection</u> , 1995, 14:179-187
	AVV.	Hino and Wilson, "Nitrogen Fixation by A-Facultative Bacillus," <u>J. Bacteriol.</u> , 1958, 75:403-408
	AWW.	Hubner et al., "Types of <i>Listeria monocytogenes</i> predicted by the positions of <i>EcoRI</i> cleavage sites relative to ribosomal RNA sequences," <u>Proc. Natl. Acad. Sci. USA</u> , 1995, 92:5234-5238
	AXX.	James and Sutton, "Biological control of botrytis leaf blight of onion by <i>Gliocladium roseum</i> applied as sprays and with fabric applicators," <u>Eur. J. Plant Pathol.</u> , 1996, 102:265-275
	AYY.	Jones and Samac, "Biological Control of Fungi Causing Alfalfa Seedling Damping-Off with a Disease-Suppressive Strain of <i>Streptomyces</i> ," <u>Biological Control</u> , 1996, 7:196-204
	AZZ.	Kohl et al., "Biological Control of <i>Botrytis cinerea</i> in Cyclamen with <i>Ulocladium atum</i> and <i>Gliocladium roseum</i> Under Commercial Growing Conditions," <u>Phytopathology</u> , 1998, 88:568-575
	AAAA.	Krieg, "Introduction to Systematics," <u>Methods for General and Molecular Bacteriology</u> , Gerhardt et al. (eds.), American Society for Microbiology, Washington, D.C., pps. 603-710
	ABBB.	Lemanceau and Alabouvette, "Biological control of fusarium diseases by fluorescent <i>Pseudomonas</i> and non-pathogenic <i>Fusarium</i> ," <u>Crop Protection</u> , 1991, 10:279-286
	ACCC.	Limón et al., "Increased Antifungal Activity of <i>Trichoderma harzianum</i> Transformants That Overexpress a 33-kDa Chitinase," <u>Phytopathology</u> , 1999, 89:254-261
	ADDD.	Liu et al., "Biological Control of Potato Scab in the Field with Antagonistic <i>Streptomyces scabies</i> ," <u>Phytopathology</u> , 1995, 85:827-831
	AEEE.	Lo et al., "Biological Control of Turfgrass Diseases with a Rhizosphere Competent Strain of <i>Trichoderma harzianum</i> ," <u>Plant Disease</u> , 1996, 80:736-741
	AFFF.	Lodish et al., "Recombinant DNA Technology," <u>Molecular Cell Biology</u> , 3 <sup>rd</sup> Edition, 1997, Scientific American Books, W.H. Freeman, NY, Chapter 7, pp. 221-261
	AGGG.	Lumdsen and Lewis, <u>Biotechnology of Fungi for Improving Plant Growth</u> , Whipps and Lumdsen (eds.), 1988, Cambridge University Press, UK, pp. 173-189
	AHHH.	McGrath, "Evaluation of <i>Gliocladium virens</i> as a biocontrol agent for managing phytophthora in cucurbits," <u>Biological and Cultural Tests for Control of Plant Diseases</u> , 1994, Vol. 10, p. 146, APS Press, St. Paul, MN
	AIII.	Nielsen and Sorensen, "Multi-target and medium-independent fungal antagonism by hydrolytic enzymes in <i>Paenibacillus polymyxa</i> and <i>Bacillus pumilus</i> strains from barley rhizosphere," <u>FEMS Microbiology Ecology</u> , 1997, 22:183-192
	AJJJ.	Pettersson et al., "Transfer of <i>Bacillus lentimorbus</i> and <i>Bacillus popillae</i> to the genus <i>Paenibacillus</i> with emended descriptions of <i>Paenibacillus lentimorbus</i> comb. nov. and <i>Paenibacillus popillae</i> comb. nov.," <u>International Journal of Systematic Bacteriology</u> , 1999, 49(2):531-538
	AKKK.	Piuru et al., "A novel antimicrobial activity of a <i>Paenibacillus polymyxa</i> strain isolated from regional fermented sausages," <u>Letters in Applied Microbiol.</u> , 1998, 27:9-13
	ALLL.	Postgate, "The Acetylene Reduction Test for Nitrogen Fixation," <u>Methods in Microbiology</u> , Norris and Ribbons (eds.), Academic Press, 1972, Vol. 6B, pp. 343-356

Examiner Signature

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet 4 of 4

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 07880-121001	Application No. 10/608,582
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Haim B. Gunner et al.	
		Filing Date June 23, 2003	Group Art Unit 1632

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
	AMMM	Quarles et al., <u>The IPM Practioner: Monitoring the Field of Pest Management</u> , 1999 Directory of Least-Toxic Pest Control Products, Vol. XX, No. 11/12, November/December
	ANNN	Rankin and Paulitz, "Evaluation of Rhizosphere Bacteria for Biological Control of Pythium Root Rot of Greenhouse Cucumbers in Hydroponic Culture," <u>Plant Disease</u> , 1994, 78(5):447-451
	AOOO	Roebroek and Mes, "Biological Control of <i>Fusarium</i> in Gladiolus with Non-Pathogenic <i>Fusarium</i> Isolates," <u>Acta Horticulturae</u> , 1992, 2(325):769-779
	APPP	Sambrook et al., <u>Molecular Cloning, A Laboratory Manual</u> , 2 <sup>nd</sup> Edition, 1989, Cold Spring Harbor Laboratory Press, Plainview, NY (TOC only)
	AQQQ	Stanghellini and Miller, "Biosurfactants: Their Identity and Potential Efficacy in the Biological Control of Zoosporic Plant Pathogens," <u>Plant Disease</u> , 1997, 81(1):4-12
	ARRR	Stevenson and James, "Evaluation of biological control of early blight and late blight," <u>Biological and Cultural Tests for Control of Plant Diseases</u> , 1994, Vol. 10, pg. 89, APS Press, St. Paul, MN
	ASSS	USDA, 1999, List of commercially-available biocontrol products, USDA website, <a href="http://www.barc.usda.gov/psi/bpdl/bioprod.htm">www.barc.usda.gov/psi/bpdl/bioprod.htm</a> - Washington, D.C.
	ATTT	Whipps, "Developments in the Biological Control of Soil-borne Plant Pathogens," <u>Advances in Botanical Research</u> , 1997, 26:1-134
	AUUU	Yamaguchi et al., "Biocontrol of <i>Fusarium</i> Wilt of Tomato and <i>Verticillium</i> Wilt of Eggplant by Non-pathogenic <i>Fusarium oxysporum</i> MT0062," <u>Ann. Phytopath. Soc. Japan</u> , 1992, 58:188-194
	AVVV	Yuen et al., "Biological Control of <i>Rhizoctonia solani</i> on Tall Fescue Using Fungal Antagonists," <u>Plant Disease</u> , 1994, 78(2):118-123

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Substitute Disclosure Form (PTO-1449)